PAPILLOMA OF THE RENAL PELVIS WITH MASSIVE HYDRONEPHROSIS.

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THE report of the present case is justified by the size of the hydronephrosis and the rarity of papillomata of the renal pelvis.

The patient presented himself to the out-patient service of the San Francisco Polyclinic complaining of massive enlargement of the abdomen. He was referred to our wards at the city and county hospital, where the following history was taken:

H. C., male; aged sixty-six years; widower; born in Ireland; laborer.

Family history, negative. Previous history, negative; denies syphilis, and there is no subjective evidence of the disease. Had a bubo and chancroids forty years ago. Moderate drinker.

Present illness. About a year ago he first noticed distress after eating, with eructations of gas. Soon thereafter he began to have frequent urination, which was rather spasmodic than constant. Often he would urinate several times in a night, and at times would fill a chamber vessel before morning. At other times urination was of normal frequency. About nine months ago he first observed an increase in the size of his abdomen. It gradually but constantly enlarged until it attained its present proportions. Since the appearance of the tumor he has on several occasions passed dark-colored urine. These attacks lasted hours or days and were not accompanied by other urinary signs. For months he has been gradually losing flesh. He is considerably lighter, and thinks the presence of the tumor accounts for the fact that he has not lost more weight. His strength has diminished, but not excessively. Appetite good. Bowels constipated. At no time has he suffered pain.

Physical examination, December 1, 1903. Man of medium frame, poorly nourished. Appearance of a man thin by nature.

Not cachectic, but somewhat resembling a patient with a large ovarian tumor. Skin greasy and pale. Mucous membranes pale. Tongue coated with a brownish-yellow layer. Lungs hyperresonant. Heart apex in fourth interspace in mid-clavicular line. Sounds clear but not forcible. Pulse 80, slight tension, regular in rhythm. Some sclerosis.

Abdomen. Distended to the extent of an abdomen pregnant at term. (Figs. 1 and 2.) Wall thin and tense. Umbilicus protuberant. Left side seems fuller than the right. Palpation shows a large, tense, rounded mass filling the whole abdomen, extending upward beneath the left costal border and into the left flank and passing downward below the pelvic brim and well over into the right side of the belly. It is tense, smooth, movable, apparently thin walled, and transmits a fluid wave with great delicacy. Just above the symphysis there is a small, oval irregularity like an attached loop of bowel or mass of omentum. Percussion gives dulness extending down from the left costal border continuous with the liver dulness, reaching without interruption to the back, well down to the left ligament of Poupart, and a variable distance to the right of the median line. Tympany in the right flank in all positions. Across the summit of the cyst is a ridge or band coursing over from the right and above the umbilicus, thence across and downward about eight centimetres from the navel outward towards the left ilium, thence down into the pelvis. It gave the feel and peristaltic wave of gut, and on inflation proved to be the colon. Greatest circumference of abdomen ninety-nine centimetres.

Extremities thin and flabby; glands in both axillæ; multiple, small nodules without periadenitis, and all of about the same size. Scrotum long and pendulous. Moderate double varicocele. A small, hard, movable mass is to be noted in the left cord.

Urine. The quantity of daily urine at no time showed any variation from the normal. After the first examination of the abdomen, with the accompanying manipulation of the tumor, blood was passed for about thirty-six hours, but then cleared up. Some days later bloody urine was again passed, the amount being decided. After the first hæmaturia had ceased, a specimen examined was pale yellow, clear, 1020, no albumen, no sugar, no casts. The bloody urine showed no fresh red cells, but degenerated reds and leucocytes.

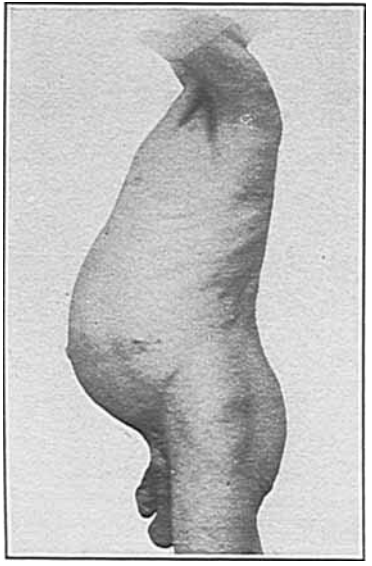

FIG. 1.—Showing abdominal protrusion caused by hydronephrosis.

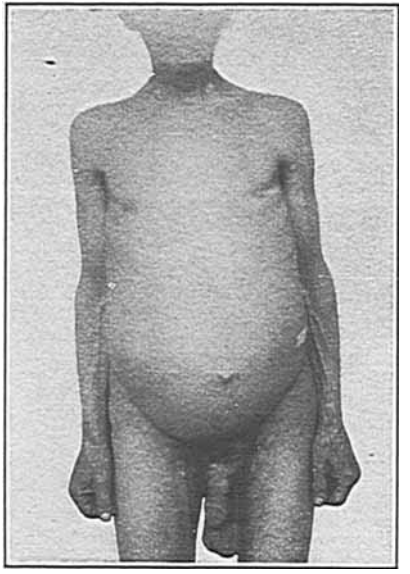

FIG. 2.—Anterior aspect of abdomen distended by hydronephrotic sac.

Blood examination, December 3, 1903. Red cells, 4,300,000; white cells, 13,000; hæmoglobin, 55 per cent.; polymorphonuclears, 83 per cent.; large lymphocytes, 10 per cent.; small lymphocytes, 7 per cent.

A second examination three weeks later gave, Red cells, 4,200,000; white cells, 6000; hæmoglobin, 41 per cent. Cystoscopy was ineffectual because of hæmorrhage from the bladder, probably due to varicosities at the vesical neck.

Urinary segregation by the improved Cathelin instrument was not practicable because of the pressure of the tumor, which prevented normal distention of the bladder.

The cyst was tapped in the left flank by the exploring needle. The needle entered a single large cavity. The fluid withdrawn was a dark, reddish-black, opaque fluid flowing easily through the needle. A sediment soon settled consisting of broken-down red and white blood-cells. No tumor cells were found. Traces of urea were detected. The dark fluid above the sediment contained albumen and paralbumin.

In considering the diagnosis, pancreatic cyst, mesenteric cyst, suprarenal tumor, and perinephric cyst were considered, but excluded. The position of the mass, dulness in the flanks, position of the colon, all indicated a retroperitoneal cyst. The urinary findings pointed strongly to the kidney. The size, presence of blood in the urine, periodic polyuria, and presence of urea in the aspirated fluid pointed strongly to hydronephroma. The cause of obstruction was obscure. Stone was eliminated by the absence of pain. The prostate was not enlarged, and there was no palpable tumor on rectal examination. Thus the possibilities were considered to be (1) papilloma of renal pelvis obstructing the ureter, and (2) malignant tumor causing pressure on the ureter and bleeding into the resulting hydronephrotic sac. Of these tumors, sarcoma was least probable because of the age. There was little ground for choosing between hypernephroma and carcinoma, but the greater frequence of the latter (30 per cent. of all kidney tumors of adults as against 17 per cent. of hypernephromas) as well as the age of the patient cast the probabilities on the side of carcinoma. A closer diagnosis was considered unwarrantable, and the patient came to operation with a tentative diagnosis of (1) papilloma of renal pelvis, or (2) carcinoma or hypernephroma of the kidney.

Operation, January 10, 1904; chloroform. An incision fifteen centimetres long was made two centimetres above ilium in such a direction as to be easily enlarged into the usual oblique nephrectomy wound. The cyst was punctured and fourteen pints of dark syrupy fluid removed. The cyst being collapsed and palpation showing no evident malignant mass or glandular enlargement, I decided on radical operation. The wound was therefore enlarged and the cyst removed. The wall was firmly adherent throughout and separation was tedious and progressed inch by inch. The outer layer of mesocolon, the large gut itself, and then the vascular mesocolon layer were in turn separated. The pedicle was ligated in mass. The ureter found, ligated, cut, and cauterized. No kidney tissue could be found. The peritoneal cavity was opened once by accident, but the rent was immediately closed. Hæmorrhage was slight and easily controlled. A Mikulicz tampon was inserted into the cavity and the ends of the wound closed around the gauze. The operation lasted two hours and twenty minutes. He was returned to the ward in fair condition, pulse of 100, soft and compressible. The patient passed sixteen ounces of urine the first twenty-four hours. For two days he continued to do unexpectedly well. Temperature, 100°–101° F.; pulse about 100. No pain, mind clear, considerable serous oozing but no hæmorrhage from the wound. On the third day, however, he began to develop a hypostatic congestion, which was obstinate to energetic treatment, and resulted in death on the fifth day. The pneumonia was not infectious, but purely hypostatic and due to the weakened circulation, the direct result of a severe operation in a patient nearly seventy years old, of low vitality, and with marked hydræmic blood (hæmoglobin, 42 per cent.).

Autopsy showed the other kidney normal, the wound and cavity in good condition, no metastatic glands, and marked hypostatic pneumonia.

The cyst was a large hydronephrotic sac with no tissue showing kidney structure. The tumor found was a papilloma the size of a small tomato situated just above the ureteric orifice and blocking its entrance by tumor masses. The microscope verified the diagnosis.

Tumors of this description are exceedingly rare. Albarran and Imbert, in their exhaustive study of renal tumors pub-

lished in 1903, have been able to collect but twenty-two cases, though their researches and reviews are exhaustive and extend over a period of years. The histories are typical,—progressive hydronephrosis, occasional bloody urine and polyuria, entire and characteristic absence of pain except for occasional mild colic from the passage of clots or tumor bits through the ureter.

Treatment is nephrectomy. Indicated by the progressive anæmia caused by the bleeding, liability to malignancy, and impossibility of diagnosing from malignant tumors.